

The Effect of Transfer Pricing Incentives on Financial Reporting of Intangible Assets: Evidence from Purchase Price Allocations

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Abstract

This study examines how tax incentives affect firms' financial reporting. Specifically, we use data on purchase price allocations within domestic acquisitions to examine whether transfer pricing incentives affect how U.S. firms record the value of intangible assets for financial reporting purposes. We find that aggressive income shifters—that is, acquirers with strong incentives to undervalue intangible assets for transfer pricing purposes—allocate a significantly lower percentage of the purchase price to intangible assets relative to acquirers without such incentives. This effect is concentrated in deals where the target is most likely to have held their intangible assets within the U.S. and deals where acquirers have subsidiaries in active tax havens. Finally, aggressive income shifters who allocate less to intangible assets experience reduced IRS scrutiny post-acquisition. Overall, these results shed light on how transfer pricing incentives influence how firms strategically allocate value to assets acquired in merger and acquisition deals.

Keywords: Mergers and Acquisitions; Purchase Price Allocation; Income Shifting; Transfer Pricing

JEL Codes: G32, G34, H26, M41

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1. Introduction

This study examines how tax incentives affect firms' financial reporting. Prior research establishes that broad measures of tax incentives, such as tax rates and levels of tax aggressiveness, affect financial reporting (e.g., Frank et al. 2009; Klassen 1997; Lennox et al. 2013; Lynch et al. 2019). Yet, little is known about how incentives arising from specific tax planning strategies influence firms' financial reporting choices. Importantly, tax strategies differ in the extent to which they generate book-tax differences and attention from tax authorities, both of which can be obscured when using broader measures of tax incentives. We fill this void in the literature by investigating the effect of incentives arising from transfer pricing, one of the most complex and uncertain areas faced by corporate tax departments worldwide (EY 2019; Towery 2017; McKinley and Owsley 2013). Specifically, we examine whether incentives to understate the value of intangible assets for transfer pricing purposes (hereafter "transfer pricing incentives") affect how U.S. firms value intangible assets for financial reporting purposes.

Examining how transfer pricing incentives affect financial reporting valuations is important for at least two reasons. First, as a key mechanism through which firms engage in tax-motivated income shifting, transfer pricing enables firms to significantly lower their tax liabilities through strategic pricing arrangements with subsidiaries located in low-tax jurisdictions. For example, Facebook Inc. (now Meta Platforms Inc.) was recently accused by the Internal Revenue Service (IRS) of severely understating the value of intellectual property (IP) licensed to its Irish subsidiary. This undervaluation allowed Facebook to charge substantially lower transfer prices for royalties from its Irish subsidiary and resulted in tax savings of approximately \$9 billion (Rubin 2020). Given the substantial cost of these strategies in terms of foregone tax revenue, U.S. and international tax authorities and other governmental groups (e.g., the Organization for Economic

Co-operation and Development (OECD)) alike have increasingly focused on curbing the ways in which U.S. MNC firms manipulate transfer prices of intangible assets to shift income.¹

Second, and relatedly, differences between the valuations of intangible assets for financial reporting and transfer pricing purposes may increase tax authority scrutiny of firms' tax positions. Although U.S. MNCs are incentivized to understate the value of IP to maximize tax savings, managers must also weigh the information conveyed via their financial reporting choices because tax authorities are regular consumers of firms' financial statement information (Bozanic et al. 2017; Graham et al. 2012). Thus, potential tax and non-tax costs arising from tax authority scrutiny may incentivize firms to adjust their financial reporting in line with that used for transfer pricing purposes.

We examine our research question using domestic merger and acquisitions (M&A) because acquirers are required to allocate the purchase price of a target company to the fair value of the net assets acquired. Consequently, acquirers must assign a value to each class of acquired assets for financial reporting purposes. Given that managers have discretion to strategically assign values to acquired assets (Shalev et al. 2013), M&A deals provide a powerful setting to examine the effect of transfer pricing incentives on financial reporting valuations of intangible assets. In addition, because purchase price allocations are typically publicly disclosed, this setting may inform and aid tax authorities and policymakers in the design and enforcement of transfer pricing regulations.

We predict that acquirers with strong transfer pricing incentives reduce the percentage of the purchase price allocated to intangible assets to mitigate scrutiny from tax authorities. Specifically, material differences in valuations between tax and financial reporting may attract

¹ This is evident by the OECD's project on Transfer Pricing Aspects of Intangibles and dedicated chapters within the OECD Transfer Pricing Guidelines addressing intangible assets specifically. Please see <https://www.oecd.org/ctp/transfer-pricing/transferpricingaspectsofintangibles.htm> for more information about this project.

greater scrutiny from tax authorities (Mills 1998; Mills and Sansing 2000; Mills et al. 2010).² In addition, MNCs have powerful tax incentives to set artificially low values on intangible assets for IP transferred offshore because doing so allows them to substantiate charging their offshore subsidiaries low royalties for the use of IP developed in the U.S. (Rubin 2020; Blair-Stanek 2015). Hence, to the extent that acquirers set artificially low values to intangibles for transfer pricing purposes, they may also reduce the percentage of the purchase price allocated to intangible assets. This is because doing so minimizes differences between financial reporting valuations and transfer pricing valuations, which may, in turn, mitigate the likelihood of attracting scrutiny from tax authorities.

However, there is at least one reason why transfer pricing and financial reporting valuations of intangible assets need not differ. Although both the IRS and OECD suggest that there can be potential overlap between purchase price allocation analyses and transfer pricing analyses, both organizations warn against using financial reporting valuations as direct substitutes for transfer pricing valuations due to regulatory differences in valuation methodologies (OECD 2022; Beebe and Spiller 2018; Finan and Launiau 2011). Moreover, practitioners suggest that financial reporting and transfer pricing valuations can differ in many ways, including market assumptions, asset groupings, and treatment of legal ownership (Beebe and Spiller 2018; Cullimore et al. 2022). Thus, acquirers who engage in income shifting may not adjust their financial reporting valuations of intangible assets.

To investigate our research question, we use purchase price allocation data from Houlihan Lokey and M&A data from Securities Data Corporation (SDC) for 2003 through 2017. We follow

² The relevant value for transfer pricing purposes is not the tax basis because tax basis is most likely to be a historical carryover basis from the acquired firm. Instead, the relevant value for transfer pricing purposes is the value used to estimate the arm's length transfer price. The arm's length value can differ from fair market value set for financial reporting purposes under Accounting Standards Codification (ASC) 805.

Lynch et al. (2019) and use an industry-adjusted allocation measure as our primary outcome variable, equal to the percentage of the purchase price allocated to identifiable intangible assets minus the industry average percentage. We capture the strength of an acquirer's transfer pricing incentives by identifying firms that are aggressive income shifters (Chen and Lehmer 2021), as these firms are most likely to have the strongest incentives to understate the value of intangible assets for transfer pricing purposes. Consistent with our primary hypothesis, we find that acquirers with strong transfer pricing incentives allocate a significantly lower percentage of the purchase price to intangible assets. Economically, the results suggest that aggressive income shifters allocate 10.8% less of the purchase price to intangible assets relative to other acquirers, translating to a \$302.4 million reduction in the average allocation to intangible assets.

To triangulate these primary findings, we next investigate instances where theory suggests the effect of transfer pricing incentives on intangible asset allocations will be more pronounced. First, transfer pricing arrangements often involve firms using licensing arrangements to charge their subsidiaries located in low-tax countries artificially low royalty rates for use of intangible assets located in the U.S. (Blair-Stanek 2015). Thus, we expect the effect of acquirers' transfer pricing incentives to be strongest when these firms have subsidiaries in low-tax countries prior to the acquisition. Second, we expect the effect to be concentrated among deals where the target holds their intangible assets domestically because U.S. acquirers will need to offshore these assets out of the U.S. to engage in outbound income shifting. Consistent with our predictions, we find that the effect of aggressive income shifting on purchase price allocations to intangible assets is concentrated in deals where the target is most likely to hold their intangible assets in the U.S. and those in which the acquirer has a subsidiary in active tax havens.

Finally, we examine the economic consequences of aggressive income shifters allocating less to intangible assets in their purchase price allocations. Specifically, we examine whether

aggressive income shifters' purchase price allocations affect post-acquisition IRS scrutiny. To the extent that reducing the amount of the purchase price allocated to intangible assets enables firms to minimize differences between transfer pricing and financial reporting, we expect aggressive income shifters to experience lower IRS scrutiny following acquisitions. Using IRS downloads of firms' 10-Ks (Bozanic et al. 2017), we find that aggressive income shifters experience lower IRS scrutiny following the acquisition when they allocate a smaller percentage of the purchase price to intangible assets. This is consistent with acquirers adjusting their financial reporting valuations to conform with their transfer pricing valuations in order to mitigate future tax authority scrutiny.

Our study makes several contributions to the literature. First, this study contributes to the literature on the determinants of purchase price allocations in business combinations. While prior research has predominately focused on allocations to goodwill (e.g., Henning and Shaw 2000; Shalev et al. 2013), recent research has begun to explore allocations to other asset classes such as identifiable intangible assets (e.g., Ashby et al. 2023). We extend this line of research by identifying a novel tax-driven incentive that provides further evidence that non-financial reporting-based incentives influence managers' purchase price allocations.

Second, this study contributes to research on the consequences of income shifting. While an extensive literature exists on the determinants of income shifting, only a limited set of studies examine the consequences of this unique form of tax planning. For example, De Simone et al. (2022) find that aggressive income shifters are less sensitive to local investment opportunities while Chen et al. (2018) find that firms with greater levels of income shifting have weaker information environments. Our findings suggest that firms with a historical pattern of aggressively shifting income attempt to substantiate their low transfer prices for intangible assets by allocating a lower percentage of the purchase price to intangible assets for financial reporting. This financial reporting consequence is important because intangible assets are frequently contested in transfer

pricing disputes and purchase price allocations serve as publicly visible measures of value for tax authorities to access.

Finally, this study contributes to the literature on the trade-offs between financial reporting and tax incentives. Although Lynch et al. (2019) show that the relative strength of financial reporting incentives compared to tax incentives affects firms' purchase price allocations, they do so in a sample of asset-based deals where the acquirer receives a step-up in the tax basis of the assets acquired. In contrast, we show that transfer pricing incentives have a significant effect on purchase price allocations for a sample comprised predominately of deals where the acquirer is unlikely to receive a step-up in the tax basis of assets acquired. This offers new evidence of the effect of a tax incentive distinct from the depreciation-driven tax benefits studied in prior research (e.g., Lynch et al. 2019; Henning and Shaw 2000).

The remainder of this paper proceeds as follows. Section 2 reviews prior research and develops our hypotheses. Section 3 describes our research design. Section 4 discusses the main results and Section 5 provides additional analyses. Section 6 concludes.

2. Background, related literature and hypothesis development

2.1 Background

An extensive line of research documents that R&D activities and intangible assets are significant determinants of tax-motivated income shifting (Grubert 2003; De Simone et al. 2020; De Simone et al. 2019; Cheng et al. 2021). Because intangible assets lack physical substance, these assets are extremely mobile, allowing MNCs to easily transfer them to offshore subsidiaries via licensing arrangements. However, intangible-based income shifting strategies are typically subject to complex transfer pricing rules. These rules rely heavily on the "arm's length principle," which generally requires that transfers between related entities in different jurisdictions take place as if they were between unrelated parties. While MNCs are subject to the arm's length principle when

setting transfer prices, they are still afforded a great deal of discretion due to the subjectivity in valuing transactions involving intangible assets. Indeed, prior research finds that MNCs use their discretion in setting transfer prices to generate substantial tax savings (e.g., Smith 2002; Kohlhasse and Wielhouwer 2023).

To illustrate how intangible assets can be used to engage in tax-motivated income shifting, Figure 1 presents an MNC with a parent entity in the U.S. and a subsidiary entity in a low-tax country. A common approach to shift income is to license valuable IP created or located in the U.S. to a subsidiary in a low-tax country. Sales generated from the subsidiary's use of the IP will be considered earned in the low-tax country, while the U.S. parent will receive royalty payments as compensation for the subsidiary's use of the IP. In this case, the MNC will be incentivized to manipulate the transfer price of the royalty payments *downward* such that income considered to be earned in the U.S. is minimized and income considered to be earned in the low-tax country is maximized. This strategy effectively shifts income that would otherwise be taxed in the U.S. to a country with a lower tax rate.

The example above illustrates that setting a low valuation for the intangible asset licensed overseas is vital to the success of many intangible-based income shifting strategies. Indeed, Blair-Stanek (2015, p. 5) remarks that “virtually all IP-based tax-avoidance schemes involve assigning an artificially low price to a piece of IP at some point in time.” Further, the undervaluation of intangible assets extends beyond licensing strategies used to shift income. De Simone and Sansing (2019) find that MNCs are more likely to use cost sharing agreements to shift income when the MNC's ability and opportunity to understate the fair market value of the IP is high. They argue that U.S. parent companies seek to undervalue their net contribution to the development of IP under cost-sharing arrangements with foreign subsidiaries to minimize future taxable income attributable to the U.S. Together, licensing arrangements and cost sharing arrangements are among the most

popular IP offshoring approaches (Blair-Stanek 2015), suggesting that intangible undervaluation is likely to be pervasive among MNCs that shift income aggressively.

2.2 Hypothesis Development

Under ASC 805 and its predecessor standards Statement of Financial Accounting Standards (SFAS) 141 and 141R, acquiring firms in business combinations are required to allocate the purchase price of the target to the fair value of the net assets acquired. Prior research suggests that managers of acquiring firms allocate purchase prices strategically in response to financial reporting incentives. For example, Shalev et al. (2013) find that acquiring firms allocate a greater proportion of the purchase price to goodwill when the acquiring firm's CEO receives a greater proportion of her compensation in bonuses. They posit that the effect is driven by goodwill not being subject to amortization, allowing the acquiring firm to report inflated earnings in subsequent periods. Subsequent research further corroborates that other financial reporting factors, including SFAS 142, goodwill amortization, and non-GAAP reporting, influence managers' strategic allocation of purchase prices largely because acquiring firms are incentivized to report more favorable future earnings (Ashby et al. 2023; Koonce et al. 2022; Zhang and Zhang 2017).

In addition to prior research examining the influence of financial reporting incentives on purchase price allocations, several studies also examine the effect of tax-specific incentives in these transactions. However, the literature primarily focuses on the tax incentive to claim future depreciation against taxable income. For example, Henning and Shaw (2000) find that a law change permitting the amortization of goodwill for tax purposes led to an increase in the allocation of purchase price to goodwill. Similarly, Lynch et al. (2019) find that acquirers with stronger tax incentives relative to financial reporting incentives allocate more value to depreciable assets relative to intangible assets in order to claim future tax depreciation. Although both Henning and Shaw (2000) and Lynch et al. (2019) provide evidence that acquiring firms respond to tax

incentives in their purchase price allocations, depreciation-based incentives represent only a small subset of the possible tax incentives that can influence how managers allocate value in business combinations. Such incentives are also conceptually distinct from transfer pricing incentives because depreciation-based incentives are generally only present in taxable asset acquisition deals where the acquirer receives a step-up in the tax basis of the assets acquired. Conversely, transfer pricing incentives can exist independent of deal structure and therefore, requires alternative theories to predict its influence over purchase price allocations.

We argue that acquirers that set aggressively low transfer prices to shift income are not likely to desire attention from tax authorities regarding the valuations they set for their intangible assets. Specifically, large book-tax differences are significant determinants of IRS scrutiny and tax audits (Mills 1998; Mills and Sansing 2000). In other words, financial reports that reveal differences in accounting and tax treatment act as public signals to tax authorities about where to allocate scarce audit resources (Mills et al. 2010; Yost 2022). Given that valuations of intangible assets are among the most heavily scrutinized transactions for tax purposes (Cullimore et al. 2022), aggressive income shifters may be wary of purchase price allocations to intangible assets that substantially differ from their valuations for transfer pricing purposes. Thus, to the extent that acquirers are incentivized to assign artificially low values to intangibles for transfer pricing, they may do the same for financial reporting purposes to avoid attracting additional scrutiny. We state this hypothesis in the alternative as follows:

H1: Acquirers with strong incentives to understate intangible asset values for transfer pricing purposes allocate a smaller percentage of the purchase price to intangible assets relative to acquirers without such incentives.

However, there is also reason to believe that financial accounting and tax valuations for intangibles assets may not differ. Specifically, the IRS has conceded that valuations for transfer pricing purposes can result in markedly different prices than valuations for financial reporting

purposes.³ Although both the IRS and OECD state that purchase price allocations can be useful as a “starting point” for transfer pricing analyses, both organizations warn against using financial reporting valuations as direct substitutes for transfer pricing valuations (Beebe and Spiller 2018; OECD 2022). Recent practitioner commentary also suggest that financial reporting valuations and transfer pricing valuations can differ in many ways, including in their treatment of legal ownership, market assumptions used, and the extent that intangible assets can be grouped together (Beebe and Spiller 2018; Cullimore et al. 2022). Consequently, acquirers that aggressively shift income may not be influenced by their transfer pricing valuations because large discrepancies in price can potentially be explained by the differences in methodologies prescribed for each type of valuation.

3. Sample and research design

3.1 Data and sample selection

To investigate our research question, we use M&A data from SDC, purchase price allocation data from Houlihan Lokey, financial data from Compustat, executive compensation data from Execucomp, and stock return data from CRSP.⁴ The sample begins in 2003, the first year for which purchase price allocation data is available, and it ends in 2017, to mitigate effects of the Tax Cuts and Jobs Act (TCJA) and ensure that acquirers had similar tax incentives throughout the sample period.

Our sample begins with all domestic acquisitions that involve a publicly listed firm who acquires at least 50% of the target firm’s shares. We require acquisitions to involve at least \$10 million in deal value (e.g., Shalev et al. 2013).⁵ To ensure that acquirers in the sample have an

³ Please see https://www.irs.gov/pub/int_practice_units/isi_c_06_04.pdf for a comparison of the arm’s length standard and other valuation approaches.

⁴ Houlihan Lokey’s dataset provides a breakdown the value allocated to intangible assets, tangible assets, and goodwill in addition to providing data on the total purchase price paid. This dataset has been used in several accounting studies (e.g., Ashby et al. 2023, King et al. 2023, and McInnis and Monsen 2023).

⁵ To maximize sample size, we fill missing values of foreign pretax income (PIFO), domestic pretax income (PIDOM), and pretax income (PI) based on the criteria described in Dyreng and Lindsey (2009). For example, missing foreign

allocation decision involving intangible assets, we require that each deal have an allocation greater than zero to intangible assets (Lynch et al. 2019). We also eliminate acquisitions where the acquirer or target is not incorporated in the U.S. to ensure that the deal involves only U.S.-based parties. This mitigates the extent to which any intangible assets acquired are already located in low-tax jurisdictions outside of the U.S. We also eliminate all deals where the acquirer or target is in the utilities (SIC 4900 to 4999) or financial services (SIC 6000 to 6999) industries (Klassen and Laplante 2012). Finally, we require all acquisitions contain data necessary to compute control variables. To mitigate the influence of outliers, we winsorize continuous variables at the 1st and 99th percentiles. Our final sample includes 335 domestic acquisitions involving publicly listed acquirers and targets. Table 1 provides detailed sample selection criteria. Table 2 provides the average purchase price allocation to intangible assets by the target's Fama-French 12 industry classification.

3.2. Measures of aggressive income shifting

Aggressive income shifters are likely to have the strongest incentives to understate values of intangible assets for transfer pricing purposes due to their propensity to use intangible assets to engage in outbound income shifting (Chen and Lehmer 2021; De Simone et al. 2019). To capture aggressive income shifting, we follow Chen and Lehmer (2021) in identifying firms that achieve near-zero domestic income, as these firms are extremely sensitive to tax rate incentives to shift income. Thus, we first create an indicator variable, *Acq_SmallConsistent*, set equal to 1 if the acquirer has domestic pretax income scaled by total assets within the range [-0.025, 0.025] and foreign pretax income scaled by total assets greater than 0.025 in at least three out of the five years

pretax income is replaced with the difference between total pretax income and domestic pretax income if both total pretax income and domestic pretax income are non-missing.

immediately preceding the acquisition year, and 0 otherwise.⁶ Second, we create *Acq_SmallSum*, which is equal to the number of years within the five-year span immediately preceding the acquisition year that the acquirer has domestic pretax income scaled by total assets within the range [-0.025, 0.025] and foreign pretax income scaled by total assets greater than 0.025. As *Acq_SmallSum* ranges between 0 and 5, this measure complements *Acq_SmallConsistent* because it allows us to capture greater variation in acquirers' historical pattern of income shifting relative to a dichotomous measure alone.⁷ We measure acquirers' domestic and foreign income in the five years immediately preceding the acquisition year, consistent with prior research on tax-motivated income shifting, which argues that MNCs' incentives to shift income are better measured over multiple years (e.g., Klassen and Laplante 2012).

3.3 Empirical model

To examine the relation between transfer pricing incentives and intangible asset purchase price allocations, we estimate the following model using ordinary least squares (OLS) regression:

$$Adj_Intang\%_i = \alpha_0 + \alpha_1 AggShift_i + \alpha_2 AcquirerControls_i + \alpha_3 TargetControls_i + \alpha_4 DealControls_i + TargetIndustryFE + YearFE + \epsilon_i \quad (1)$$

where subscript *i* represents a given M&A deal, and *Agg_Shift* represents either

Acq_SmallConsistent, or *Acq_SmallSum*, as defined above. To measure the proportion of the

⁶ Chen and Lehmer (2021) employ a [-0.01, 0.01] range and scale by market value of equity rather than assets. We choose a wider range around zero and scale by total assets for two reasons. First, the [-0.025, 0.025] range and the use of total assets as a scalar have been empirically supported by Grubert et al. (1993). Using IRS confidential data, Grubert et al. (1993) find that an abnormally large number of foreign-controlled U.S. entities report taxable income scaled by total assets within the range [-0.025, 0.025]. Second, the wider range around zero allows for the identification of acquirers that are suspected of being aggressive shifters or that are in the process of aggressively shifting to zero, as opposed to only firms that have already achieved near-zero taxable income. Given that M&A studies have much smaller sample sizes than most empirical tax avoidance and income shifting studies, the wider range provides increased statistical power for empirical tests, while retaining the conceptual appeal of a threshold-based measure of aggressive income shifting.

⁷ In untabulated analysis, we re-run our analyses using a single period indicator variable, equal to 1 if the acquirer has domestic pretax income scaled by total assets within the range [-0.025, 0.025] and foreign pretax income scaled by total assets greater than 0.025 in the year immediately preceding the acquisition year, and 0 otherwise. Results are qualitatively similar to those reported in the paper.

purchase price allocated to intangible assets, we construct *Adj_Intang%*, which is the total value allocated to identifiable intangible assets scaled by the purchase price less the industry mean intangible asset allocation (Lynch et al. 2019).^{8, 9} Thus, *Adj_Intang%* estimates the deviation from the “true value” allocated to intangible assets.

We control for various acquirer- (*AcquirerControls*), target- (*TargetControls*), and deal-level (*DealControls*) characteristics that prior research suggests are likely to affect acquirers’ purchase price allocations (Shalev et al. (2013). For the acquirer, this includes book-to-market ratio (*Acq_BTM*), CEO bonus intensity (*CEO_Bonus*), CEO ownership (*Log_CEO_Own*), and whether the acquirer is a multinational firm (*Acq_MNC*). For the target, we include book-to-market ratio (*Trg_BTM*), property, plant and equipment (*Trg_PPE*), sales growth (*Trg_SalesGrowth*), R&D (*Trg_R&D*), advertising (*Trg_Advertising*), goodwill (*Trg_Goodwill*), and intangible assets (*Trg_Intangibles*). Finally, we include deal announcement changes in market value (*Acq_Ret_DV* and *Trg_Ret_DV*), an indicator for same industry deals (*IndustrySame*), relative size of the acquirer to the target (*Relative*), and an indicator to capture acquirers’ flexibility to avoid future goodwill impairment (*Lack_Slack*). To maximize our sample size, we follow Ashby et al. (2023) and set missing values of *CEO_Bonus* and *Log_CEO_Own* to zero and include an indicator variable, *Execucomp_Miss*, set equal to one when data from Execucomp is missing to calculate *CEO_Bonus* or *Log_CEO_Own*, and zero otherwise (Maddala 1977). Because our sample contains observations where the acquirer may not report foreign pretax income, we also include an indicator variable (*Acq_MNC*), set equal to one if the acquirer has nonmissing pretax foreign income, and zero

⁸ In untabulated analysis, we re-estimate equation (1) after defining *DealValue* as the total purchase consideration (equal to the fair value of total assets acquired) reported by Houlihan Lokey or as the deal value reported by SDC. Results are similar to those reported in the paper.

⁹ We use a larger set of deals (618 in total – see Table 2) with available purchase price allocation data from Houlihan Lokey to calculate industry mean allocations for the purposes of constructing *Adj_Intang%*. The broader sample increases the amount of information used to calculate each industry mean allocation and mitigates the possibility that the industry adjustment is derived from too few observations in a given industry.

otherwise (Fox and Wilson 2022). Finally, we include target industry and year fixed effects and cluster standard errors by target firm industry (Shalev et al. 2013). All variables are defined in detail in Appendix A.

4. Empirical results

4.1 Descriptive statistics

Table 3 presents descriptive statistics for all variables used to estimate equation (1) for our tests of H1. The mean (median) allocation to intangible assets is 38.4% (34.2%), while the mean (median) industry-adjusted allocation is -4.2% (-5.1%).¹⁰ Approximately 10.4% of our sample is identified as an aggressive income shifter using *Acq_SmallConsistent*. Descriptive statistics for other variables are similar to those in prior research (e.g., Ashby et al. 2023 and Shalev et al. 2013).

4.2 The effect of transfer pricing incentives on purchase price allocations (H1)

Table 4 presents results of estimating equation (1) for our variables of interest. The coefficients on *Acq_SmallConsistent*, and *Acq_SmallSum* are negative and statistically significant ($p < 0.01$). Thus, consistent with H1, acquirers with strong transfer pricing incentives allocate a significantly lower percentage of the purchase price to intangible assets relative to other acquirers. Economically, the results in Column (1) suggest that acquirers that are aggressive income shifters allocate approximately 10.8% less of the purchase price to intangible assets relative to other acquirers. Given that the mean *DealValue* in our sample is \$2.8 billion (see Table 2), this equates to aggressive income shifters allocating \$302.4 million less to intangible assets.

In addition, results in Column (2) suggest that for every year within the five years preceding the acquisition that an acquirer is an aggressive income shifter, approximately 2.7% less of the

¹⁰ Although Shalev (2009) documents that the non-industry adjusted average allocation to intangible assets in a much earlier sample is approximately 24%, his calculation excludes in-process R&D. Moreover, a higher average allocation in our sample may reflect the increasing reliance on intangible-based technologies in the economy over time (Srivastava 2014).

purchase price is allocated to intangible assets. Overall, the results indicate that acquirers with strong incentives to understate the value of intangible assets for transfer pricing allocate significantly lower percentages of the purchase price to intangible assets.

5. Additional analyses

Although our main results suggest a negative relation between aggressive income shifters and intangible asset purchase price allocations, we conduct several analyses to triangulate and extend these findings. We first examine whether results are strongest where theory would predict—for acquirers with low-tax subsidiaries prior to the acquisition and target firms with domestic intangibles. We also investigate the IRS scrutiny consequences of the effect of transfer pricing incentives on purchase price allocations and examine a potential alternative explanation.

5.1 Low-tax subsidiaries

As discussed above, U.S. MNCs have incentives to set low valuations of intangible assets for transfer pricing purposes. This is often accomplished through licensing arrangements where artificially low royalty rates are charged to subsidiaries in low-tax countries for use of intangible assets located in the U.S. (Blair-Stanek 2015). However, acquiring firms must have subsidiaries in low-tax countries to take advantage of this tax planning strategy. Thus, we expect the effect of transfer pricing incentives on purchase price allocation to be concentrated among deals where the acquirer has subsidiaries in low-tax countries.

To test this proposition, we proxy for the presence of low-tax subsidiaries by using the measure of active tax haven subsidiaries from Law and Mills (2022).¹¹ Specifically, we partition the sample based on *ActiveHaven*, an indicator variable equal to one if the acquiring firm has at least one active haven subsidiary in the year immediately preceding the deal announcement, and

¹¹ Specifically, Law and Mills (2022) find that firms with active haven subsidiaries have lower effective tax rates than firms without such subsidiaries, and that the effect of having an active haven subsidiary subsumes the effect of mere mentions of a tax haven subsidiary in Exhibit 21.

zero otherwise. We then re-estimate equation (1) in both subsamples.

Table 5 reports the results. Consistent with our expectations, we find a negative and significant coefficient ($p < 0.01$) across both measures of aggressive income shifting in the subsample of deals where the acquirer has an active tax haven subsidiary prior to the acquisition. In contrast, we find no consistent evidence of a significant relation between any of our aggressive income shifting measures and *Adj_Intang%* for the subsample of firms without an active tax haven subsidiary ($p > 0.10$). In addition, the differences in coefficients on *AggShift* between subsamples are statistically significant across both measures of *AggShift* ($p < 0.10$). Overall, these results suggest that the negative effect of transfer pricing incentives on intangible asset allocation is stronger when acquirers have pre-existing organizational structures to facilitate income shifting via transfer pricing of intangibles.

5.2 Domestic intangibles

We next test whether the effect of transfer pricing incentives on purchase price allocations varies with the location of the intangible assets acquired from the target. We expect acquirers' transfer pricing incentives to be strongest if the acquired intangible assets are located in the U.S. because such assets will need to be transferred out of the U.S. via licensing arrangements or outright sales in order to shift income. Although we restrict our sample to only domestic deals where both the acquirer and the target are incorporated in the U.S., it is possible that assets acquired in the deal are located outside of the U.S. Indeed, De Simone et al. (2020) find that U.S. MNCs have increasingly relied on foreign R&D activities, suggesting that many U.S. based companies have R&D facilities in foreign countries. Thus, we require a proxy for the likelihood of a target owning domestically held intangibles immediately prior to the deal announcement.

To estimate the likelihood of the target owning only domestic intangible assets, we follow De Simone et al. (2020) by identifying the locations of inventors listed on patents. Specifically, we

obtain data from PatentsView of the locations of inventors listed on patents granted to the target in the five years preceding the acquisition.¹² We then construct an indicator variable, *DomInventor*, equal to one if all the inventors listed on the targets' patents in the five years preceding the acquisition have addresses located in the U.S., and zero otherwise. Effectively, this variable identifies target firms that use patents to protect technologies created exclusively by domestic inventors. We argue that such targets are the most likely to hold all their intangible assets within the U.S. since the location of the inventors is a proxy for the location of the firms' R&D activities (De Simone et al. 2020).

To test this possibility, we partition the sample based on *DomInventor* and estimate equation (1) for each subsample. Table 6 presents the results. We find that, across all measures of aggressive income shifting, the coefficient on *AggShift* is negative and significant ($p < 0.01$) in the subsample where *DomInventor* = 1. Although the coefficients on *AggShift* are also negative and significant ($p < 0.10$) where *DomInventor* = 0, the coefficients are approximately three times smaller than those where *DomInventor* = 1 and these differences are statistically significant ($p < 0.01$). Thus, the evidence is consistent with our prediction that the negative effect on purchase price allocations to intangible assets is driven by acquirers' transfer pricing incentives to migrate domestically owned intangible assets offshore.

5.3 IRS scrutiny, transfer pricing incentives, and purchase price allocation

In this section, we investigate a potential outcome of purchase price allocations to intangible assets—tax authority scrutiny. That is, we examine whether the under-allocation of the purchase price to intangible assets by firms with strong transfer pricing incentives affects IRS scrutiny following the acquisition. Specifically, prior literature (e.g., Cloyd et al. 1996; Mills 1998)

¹² We use the grant date of the patent and select a five-year time horizon, following prior research in the management and finance literatures examining patents in M&A settings (e.g., Bena and Li 2014; Grimpe and Hussinger 2014; Testoni 2022)

suggests that firms may align their financial reporting and transfer pricing valuations to avoid attracting additional scrutiny from tax authorities. To the extent that under-allocation of the purchase price to intangible assets enables firms to minimize differences between tax and financial reporting, we expect aggressive income shifters to exhibit a negative association between the extent of intangible asset under-allocation and post-acquisition IRS scrutiny.

To test this, we proxy for IRS scrutiny using data on IRS downloads of firms' 10-Ks from Bozanic et al. (2017). We then construct an indicator variable, *HighUnderAllocate*, in three steps. First, for each deal in our original sample, we multiply *Adj_Intang%* by negative one so that higher values correspond to a *greater* under-allocation of intangible assets. Second, we average these values for each unique acquirer-deal year combination in the sample. Thus, if an acquirer engaged in more than one M&A deal in a given year, the values of *Adj_Intang%* times negative one would be averaged across those deals announced for that acquirer-deal year. Third, we set *HighUnderAllocate* equal to one if the acquirers' average of *Adj_Intang%* times negative one is above the median, and zero otherwise. Thus, *HighUnderAllocate* identifies acquirers in the sample that allocated the smallest industry-adjusted percentages of the purchase price to intangible assets.

Next, we construct a firm-year panel comprising of years $t - 1$ and $t + 1$ for each acquirer-deal year but excluding the year of the deal announcement (year t). We restrict this test to deals with available IRS scrutiny data one year pre- and post- deal announcement, resulting in a sample of deals announced from 2004 to 2014. Panel A of Table 7 reports descriptive statistics for the panel of acquirer firm-years used to estimate the following Poisson regression:

$$\begin{aligned}
 IRS_10KDownloads_{i,t} = & \alpha_0 + \alpha_1 Post_{i,t} + \alpha_2 HighUnderAllocate_{i,t} + \alpha_3 AggShift_{i,t} \\
 & + \alpha_4 AggShift_{i,t} * HighUnderAllocate_{i,t} \\
 & + \alpha_5 Post_{i,t} * HighUnderAllocate_{i,t} \\
 & + \alpha_6 Post_{i,t} * AggShift_{i,t} \\
 & + \alpha_7 Post_{i,t} * AggShift_{i,t} * HighUnderAllocate_{i,t} \\
 & + \alpha_k Controls_{i,t} + YearFE + AcquirerIndustryFE + \epsilon_{i,t}
 \end{aligned} \tag{2}$$

where *Post* equals one for the year following the year of the deal announcement, and zero for the year before the year of the deal announcement and *AggShift* and *HighUnderAllocate* are defined above.¹³ Following Bozanic et al. (2017), we include a set of control variables (*Controls*) that are associated with the level of IRS attention as well as year and industry fixed effects.¹⁴ To the extent that allocating a lower percentage of the purchase price to intangibles decreases an aggressive income shifter-acquirer's IRS scrutiny following the acquisition, we expect the coefficient on *Post * AggShift * HighUnderAllocate* to be negative and significant.

Panel B of Table 7 presents the results of estimating equation (2). Across both measures of *AggShift*, the coefficients on *Post*AggShift*HighUnderAllocate* are negative and statistically significant ($p < 0.05$). This suggests that aggressive income shifters experience lower IRS scrutiny in the year following an M&A deal when they allocate a smaller percentage of the purchase price to intangible assets. Using Column (1) as a baseline, aggressive income shifters who are high “under-allocators” are associated with an 81% reduction in the number of IRS 10-K downloads in the post-acquisition year relative to aggressive income shifters who are not high “under-allocators”.¹⁵ Collectively, these results provide evidence of a *intended* consequence of intangible asset under-allocation, supporting our argument that aggressive shifting acquirers allocate smaller percentages of the purchase price to intangible assets to attract less tax authority scrutiny.

¹³ Following Cohn et al. (2022), we use fixed effects Poisson regression because the dependent variable in equation (2) is a count variable. Cohn et al. (2022) also note the deviation in the count variable from the mean-variance equality assumption of Poisson regression affects the efficiency of the model but does not induce bias. Therefore, the authors generally recommend using Poisson regression over other models of count data such as negative binomial regression. Nevertheless, because the distribution of *IRS_10KDownloads* exhibits overdispersion, we separately estimate equation (2) using negative binomial regression without fixed effects and obtain qualitatively similar results (untabulated).

¹⁴ We exclude UTBs as a control variable in our tabulated tests due to the reduction in sample size that would result from UTBs only being available for observations in years 2007 or later. In untabulated analysis, our results remain qualitatively similar when controlling for acquirers' ending UTB balance scaled by beginning of year total assets.

¹⁵ We calculate the economic significance as $\exp(-1.676) - 1$ or -0.81, where -1.676 is the coefficient on *Post*AggShift*HighUnderAllocate* in Column (1) of Table 7 Panel B.

5.4 Alternative Explanations

The evidence above suggests that firms with strong transfer pricing incentives use their discretion to opportunistically set lower allocations of the purchase price to intangible assets. In this section, we address three potential alternative explanations for our results. First, it is possible that acquirers with strong transfer pricing incentives pay more in M&A deals, potentially because they can identify targets with assets that can be used to generate future tax savings. To the extent that financial reporting standards inadequately capture the fair value of future tax savings, then the percentage of the purchase price allocated to intangible assets could be biased downward due to a higher purchase price paid (e.g., a larger denominator).

To ensure that this alternative explanation is not driving our results, we test whether acquirers with strong transfer pricing incentives pay higher premiums in M&A transactions. We estimate this test using our primary sample restricted to deals with available M&A premium data, which represents 267 unique deals.¹⁶ We then estimate the following equation using OLS:

$$\begin{aligned} Prem_i = & \alpha_0 + \alpha_1 AggShift_i + \alpha_k AcquirerCharacteristics_i + \alpha_k TargetCharacteristics_i \\ & + \alpha_k DealCharacteristics_i + TargetIndustryFE + YearFE + \varepsilon_i \end{aligned} \quad (3)$$

where $Prem$ is measured as the four-week ($Prem4wk$) or one-week ($Prem1wk$) acquisition premium (e.g., Mescall and Klassen 2018; Chow et al. 2016). We also include a variety of acquirer, target, and deal characteristics and include year and target industry fixed effects to control for unobservable time or industry-specific factors that may confound our results (Chow et al. 2016).

Table 8 presents the results. Across both measures of $AggShift$, we find no evidence that aggressive income shifters exhibit significantly higher acquisition premiums, relative to non-

¹⁶ We find qualitatively similar results when we estimate Equation (3) for a larger sample of 708 deals that is not restricted to the sample of deals described in Table 1 (untabulated).

aggressive income shifters.¹⁷ This is inconsistent with acquirers with strong transfer pricing incentives paying more in M&A deals and mitigates the extent to which our results are driven by higher acquisition prices paid by acquirers with strong transfer pricing incentives.

Second, an additional alternative explanation for our results relates to acquirers' incentives concerning depreciable assets. Specifically, Lynch et al. (2019) find that acquirers with incentive to lower their marginal tax rate allocate more to depreciable assets and less to intangible assets. However, as Lynch et al. (2019) acknowledge, it is extremely rare for acquirers of C-corporation shares to receive a step-up in the basis of the assets acquired (Erickson and Wang 2007).¹⁸ Given that our sample is predominately comprised of share acquisitions of publicly traded targets, a lack of step-up eliminates any depreciation-driven tax incentive to allocate greater value to depreciable assets in purchase price allocations. Consequently, our results provide evidence of a tax incentive distinct from the one examined by Lynch et al. (2019).

Third, our results may be driven by inherent differences between acquirers that aggressively shift income (treatment firms) and those that do not (control firms). To alleviate this concern, we re-estimate our tests using entropy balancing when *AggShift* equals our binary treatment measure, *Acq_SmallConsistent*. Entropy balancing re-weights treatment and control observations to achieve joint covariate balance (Hainmueller 2012). We find that our results remain qualitatively similar when using entropy balance weights in our multivariate analyses (untabulated).

¹⁷ In untabulated analysis, we re-estimate equation (3) after extending the event window to both 42 and 63 days (Eaton et al. 2021) and find similar results.

¹⁸ Erickson and Wang (2007) analytically show that it is disadvantageous for acquirers to make an Internal Revenue Code (IRC) §338(g) election to step-up the tax basis of assets in an acquisition of C-Corporation shares. Consistent with this, none of the acquirers in their sample of private company C-Corporation acquisitions made an IRC §338(g) election to obtain a step-up in the tax basis of the assets. Further, Lynch et al. (2019) use a sample of predominately asset acquisitions and exclude share acquisitions of C-corporations because of the low likelihood of a tax basis step-up on assets acquired.

6. Conclusion

The use of intangible assets to engage in tax-motivated income shifting has been well documented in both the media and academic research. Moreover, such strategies have caught the attention of global policymakers who struggle to enforce transfer pricing regulations on MNCs due to the subjectivity inherent in valuing intangible assets. MNCs often exploit this subjectivity by setting artificially low transfer prices on intangible assets licensed or sold to related entities in low-tax jurisdictions. In this study, we shed light on how incentives to understate the value of intangible assets for transfer pricing purposes influence how firms allocate value to intangible assets in business combinations.

Using the domestic M&A setting, we document that acquiring firms with such incentives allocate a significantly lower percentage of the purchase price to intangible assets. Further, we find that the effect is more pronounced in deals where the target is likely to have held their intangible assets within the U.S., and those where the acquirer has subsidiaries in active tax havens. Overall, this study contributes to the M&A and income shifting literatures by documenting the effect of a prominent tax-driven incentive on purchase price allocations to intangible assets. The results of this study provide insight to tax authorities and policymakers on the usefulness of purchase price allocation disclosures as benchmarks for transfer prices of intangible assets.

References

- Ashby, J., J. Chyz, L.A. Myers, and B.C. Whipple. 2023. Non-GAAP earnings and definite-lived intangible asset allocations in mergers and acquisitions. *The Accounting Review*, forthcoming.
- Beebe, J. and B. Spiller. 2018. INSIGHT: Multinationals face formidable challenges in valuing intangibles: Part I—purchase price allocation. *Bloomberg Law News*. 19 Oct. Available at: https://www.bloomberglaw.com/bloomberglawnews/transfer-pricing/XCDULEI8000000?bna_news_filter=transfer-pricing#jcite.
- Bena, J., and K. Li. 2014. Corporate innovations and mergers and acquisitions. *The Journal of Finance* 69 (5): 1923–1960.
- Blair-Stanek, A. 2015. Intellectual property law solutions to tax avoidance. *UCLA Law Review* 62 (2): 1–73.
- Bozanic, Z., J.L. Hoopes, J.R. Thornock, and B.M. Williams. 2017. IRS attention. *Journal of Accounting Research* 55 (1): 79–114.
- Chen, C.W., B.F. Hepfer, P.J. Quinn, and R.J. Wilson. 2018. The effect of tax-motivated income shifting on information asymmetry. *Review of Accounting Studies* 23 (3): 958–1004.
- Chen, N. and T. Lehmer. 2021. Aggressive tax avoiders: U.S. Multinational Shifting Domestic Earnings to Zero. *The Accounting Review* 96 (5): 181–206.
- Cheng, C.A., P. Guo, C.H. Weng, and Q. Wu. 2021. Innovation and corporate tax planning: the distinct effects of patents and R&D. *Contemporary Accounting Research* 38 (1): 621–653.
- Chow, T., K.J. Klassen, and Y. Liu. 2016. Targets' tax shelter participation and takeover premiums. *Contemporary Accounting Research* 33 (4): 1440–1472.
- Cloyd, C.B., J. Pratt, and T. Stock. 1996. The use of financial accounting choice to support aggressive tax positions: Public and private firms. *Journal of Accounting Research* 34 (1): 23–43.
- Cohn, J.B., Z. Liu, and M.I. Wardlaw. 2022. Count (and count-like) data in finance. *Journal of Financial Economics* 146 (2): 529–551.
- Cullimore, S., R. Koborsi, A. Somani, S. Tuner, and J. Wood. 2022. Differences between transfer pricing and financial reporting valuations. *The Tax Adviser*. Available at: <https://www.thetaxadviser.com/issues/2022/may/differences-transfer-pricing-financial-reporting-valuations.html>.
- De Simone, L., J.J. Huang, and L.K. Krull. 2020. R&D and the rising foreign profitability of US multinational corporations. *The Accounting Review* 95 (3): 177–204.
- De Simone, L., K.J. Klassen, and J.K. Seidman. 2022. The effect of income-shifting aggressiveness on corporate investment. *Journal of Accounting and Economics* 74 (1): 1–20.
- De Simone, L., L.F. Mills, and B. Stomberg. 2019. Using IRS data to identify income shifting to foreign affiliates. *Review of Accounting Studies* 24 (2): 694–730.
- De Simone, L., and R.C. Sansing. 2019. Income shifting using a cost-sharing arrangement. *Journal of the American Taxation Association* 41 (1): 123–136.

- Dyrenge, S.D., and B.P. Lindsey. 2009. Using financial accounting data to examine the effect of foreign operations located in tax havens and other countries on US multinational firms' tax rates. *Journal of Accounting Research* 47 (5): 1283–1316.
- Eaton, G.W., T. Liu, and M.S. Officer. 2021. Rethinking measures of mergers & acquisitions deal premiums. *Journal of Financial and Quantitative Analysis* 56 (3): 1097–1126.
- Erickson, M.M., and S.W. Wang. 2007. Tax benefits as a source of merger premiums in acquisitions of private corporations. *The Accounting Review* 82 (2): 359–387.
- EY. 2019. *2019 Transfer Pricing and International Tax Survey*. Ernst & Young Global Ltd. Available at: https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/tax/tax-pdfs/ey-how-profound-change-transparency-and-controversy-are-reshaping-a-critical-business-function.pdf.
- Finan, W.F., and S. Launiau. 2011. Valuation of intangibles for transfer pricing purposes: convergence of valuations for transfer pricing purposes with valuation for other purposes. *Presentation to Working Party No. 6 of the Committee on Fiscal Affairs*. Available at: <https://www.oecd.org/ctp/transfer-pricing/47429988.pdf>.
- Fox, Z.D., and R.J. Wilson. 2022. Double trouble? IRS's attention to financial accounting restatements. *Review of Accounting Studies* 1–37.
- Frank, M.M., L.J. Lynch, and S.O. Rego. 2009. Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review* 84 (2): 467–496.
- Graham, J.R., J.S. Ready, and D.A. Shackelford. 2012. Research in accounting for income taxes. *Journal of Accounting and Economics* 53 (1–2): 412–434.
- Grimpe, C., and K. Hussinger. 2014. Resource complementarity and value capture in firm acquisitions: The role of intellectual property rights. *Strategic Management Journal* 35 (12): 1762–1780.
- Grubert, H. 2003. Intangible income, intercompany transactions, income shifting, and the choice of location. *National Tax Journal* 56 (1): 221–242.
- Grubert, H., T. Goodspeed, and D.L. Swenson. 1993. Explaining the low taxable income of foreign-controlled companies in the United States. In *Studies in International Taxation*, edited by Giovannini, A., R.G. Hubbard, and J. Slemrod, 237–270. Chicago, IL: University of Chicago Press.
- Hainmueller, J. 2012. Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis* 20 (1): 25–46.
- Henning, S.L., and W.H. Shaw. 2000. The effect of the tax deductibility of goodwill on purchase price allocations. *Journal of the American Taxation Association* 22 (1): 18–37.
- King, Z., T. Linsmeier, and D. Wangerin. 2023. Differences in the value relevance of identifiable intangible assets. *Review of Accounting Studies*, forthcoming.
- Klassen, K.J. 1997. The impact of inside ownership concentration on the trade-off between financial and tax reporting. *The Accounting Review* 72 (3): 455–474.
- Klassen, K.J., and S. Laplante. 2012. Are U.S. multinational corporations becoming more aggressive income shifters? *Journal of Accounting Research* 50 (5): 1245–1285.

- Kohlhase, S., and J.L. Wielhouwer. 2023. Tax and tariff planning through transfer prices: The role of the head office and business unit. *Journal of Accounting and Economics* 75 (2–3): 1–22.
- Koonce, L., S. Toynbee, and B.J. White. 2022. Tradeoffs in income statement and balance sheet preferences: Evidence from acquirers' goodwill valuations. Working Paper.
- Law, K.K. and L.F. Mills. 2022. Taxes and haven activities: Evidence from linguistic cues. *The Accounting Review* 97 (5): 349–375.
- Lennox, C., P. Lisowsky, and J. Pittman. 2013. Tax aggressiveness and accounting fraud. *Journal of Accounting Research* 51 (4): 739–778.
- Lynch, D., M. Romney, B. Stomberg, and D. Wangerin. 2019. Trade-offs between Tax and Financial Reporting Benefits: Evidence from Purchase Price Allocations in Taxable Acquisitions. *Contemporary Accounting Research* 36 (3): 1223–1262.
- Maddala, G.S. 1977. *Econometrics*. New York, New York: McGraw-Hill, Inc.
- McInnis, J. and B. Monsen. 2023. The Usefulness of Acquired Intangible Asset Fair Values in Predicting Future Payoffs. Working Paper.
- McKinley, J., and J. Owsley. 2013. Transfer pricing and its effect on financial reporting. *Journal of Accountancy* 216 (4): 50–54.
- Mescall, D. and K.J. Klassen. 2018. How does transfer pricing risk affect premiums in cross-border mergers and acquisitions?. *Contemporary Accounting Research* 35 (2): 830–865.
- Mills, L.F. 1998. Book-tax differences and Internal Revenue Service adjustments. *Journal of Accounting Research* 36 (2): 343–356.
- Mills, L.F., L.A. Robinson, and R.C. Sansing. 2010. FIN 48 and tax compliance. *The Accounting Review* 85 (5): 1721–1742.
- Mills, L.F., and R.C. Sansing. 2000. Strategic tax and financial reporting decisions: Theory and evidence. *Contemporary Accounting Research* 17 (1): 85–106.
- OECD. 2022. OECD Transfer pricing guidelines for multinational enterprises and tax administrations 2022. Available at: <https://www.oecd.org/tax/transfer-pricing/oecd-transfer-pricing-guidelines-for-multinational-enterprises-and-tax-administrations-20769717.htm>.
- Paugam, L., P. Astolfi., and O. Ramond. 2015. Accounting for business combinations: Do purchase price allocations matter?. *Journal of Accounting and Public Policy* 34 (4): 362–391.
- Rubin, R. 2020. Facebook and IRS Prepare for \$9 Billion U.S. Tax Court Fight. *The Wall Street Journal*. Available at: <https://www.wsj.com/articles/facebook-and-irs-prepare-for-9-billion-u-s-tax-court-fight-11581177600>.
- Shalev, R. 2009. The information content of business combination disclosure level. *The Accounting Review* 84 (1): 239–70.
- Shalev, R., I.X. Zhang, and Y. Zhang. 2013. CEO compensation and fair value accounting: Evidence from purchase price allocation. *Journal of Accounting Research* 51 (4): 819–54.

- Smith, M.J. 2002. Ex ante and ex post discretion over arm's length transfer prices. *The Accounting Review* 77 (1): 161–184.
- Srivastava, A. 2014. Why have measures of earnings quality changed over time?. *Journal of Accounting and Economics* 57 (2-3): 196–217.
- Testoni, M. 2022. The market value spillovers of technological acquisitions: Evidence from patent-text analysis. *Strategic Management Journal* 43 (5): 964–985.
- Towery, E.M. 2017. Unintended consequences of linking tax return disclosures to financial reporting for income taxes: Evidence from Schedule UTP. *The Accounting Review* 92 (5): 201–226.
- Yost, B.P. 2022. Do tax-based proprietary costs discourage public listing?. *Journal of Accounting and Economics* 75 (2–3).
- Zhang, I.X., and Y. Zhang. 2017. Accounting discretion and purchase price allocation after acquisitions. *Journal of Accounting, Auditing & Finance* 32 (2): 241–70.

Appendix A. Variable definitions

<i>Variable</i>	<i>Definition</i>
Acq_BTD	Book-tax difference, calculated as the difference between pre-tax income (PI) and taxable income, scaled by beginning of year total assets (AT). Taxable income is estimated as the sum of total federal tax expense (TXFED) and foreign tax expenses (TXFO), divided by 35%, less the change in the net operating loss carryforward balance (TLCF). (CS)
Acq_CapitalIntensity	Net property, plant, and equipment (PPENT) scaled by beginning of year total assets (AT). (CS)
Acq_Cash	Cash holdings (CH) scaled by beginning of year total assets (AT). (CS)
Acq_CashETR	Taxes paid (TXPD) divided by pretax income (PI) net of special items (SPI). Winsorized to lie between [-1,1]. (CS)
Acq_ChgNOL	Change in tax loss carryforward (TLCF) scaled by beginning of year total assets (AT). (CS)
Acq_DTA	Net deferred tax assets (TXNDBA) scaled by total assets (AT). (CS)
Acq_DTL	Net deferred tax assets (TXNDBL) scaled by total assets (AT). (CS)
Acq_GAAPETR	Total tax expense (TXT) divided by pretax income (PI) net of special items (SPI). Winsorized to lie between [-1,1]. (CS)
Acq_Intangible	Intangible assets (INTAN) scaled by beginning of year total assets (AT). Missing values of Intangible assets set to zero. (CS)
Acq_Inventory	Inventory (INVT) scaled by beginning of year total assets (AT). (CS)
Acq_Leverage	Long-term debt (DLTT) scaled by beginning of year total assets (AT). (CS)
Acq_MNC	Indicator variable equal to 1 if the acquirer has nonmissing foreign pretax income (PIFO) in the year prior to the acquisition year, and 0 otherwise. (CS)
Acq_MNE	Indicator variable equal to 1 if the acquirer has nonmissing foreign pretax income (PIFO) in the year, and 0 otherwise. (CS)
Acq_MTB	Number of shares outstanding at the end of the year (CSHO) multiplied by price per share (PRCC_F) divided by the book value of equity (CEQ). (CS)
Acq_R&DIntensity	R&D expense (XRD) scaled by beginning of year total assets (AT). Missing values of R&D expense set to zero. (CS)
Acq_Ret_DV	Acquirer's dollar amount of stock return over the three-day period around the deal announcement date scaled by <i>DealValue</i> . (CRSP, HL)
Acq_ROA	Pre-tax income (PI) scaled by total assets (AT). (CS)
Acq_SalesGrowth	Current year sales (SALE) less prior year sales, scaled by prior year sales. (CS)

Acq_SizeAT	Natural logarithm of total assets (AT). (CS)
Acq(Trg)_BigN	An indicator variable equal to 1 if the auditor (AU) in the year prior to the acquisition is one of the Big 5 auditors (Arthur Anderson, PwC, Deloitte, EY, KPMG), and 0 otherwise. (CS)
Acq(Trg)_BTD	Book-tax difference in the year prior to the acquisition, calculated as the difference between pre-tax income (PI) and taxable income, scaled by beginning of year total assets (AT). Taxable income is estimated as the sum of total federal tax expense (TXFED) and foreign tax expenses (TXFO), divided by 35%, less the change in the net operating loss carryforward balance (TLCF). (CS)
Acq(Trg)_BTM	Book value of equity (CEQ) scaled by market value of equity (PRCC F*CSHO) in the year prior to the acquisition year. (CS)
Acq(Trg)_Lev	Long-term debt (DLTT) divided by beginning of year total assets (AT) in the year prior to the acquisition. (CS)
Acq(Trg)_Litigation	An indicator variable equal to 1 if the pretax (SETP) or after-tax (SETA) litigation/insurance settlement is negative in the year prior to the acquisition, and 0 otherwise. (CS)
Acq(Trg)_ROA_Beg	Pre-tax income (PI) scaled by beginning of year total assets (AT) in the year prior to the acquisition. (CS)
Acq(Trg)_Size	Natural logarithm of the market value of equity (PRCC_F*CSHO) in the year prior to the acquisition. (CS)
Acq(Trg)_TermFee	An indicator variable equal to 1 if the deal contains a termination fee payable, and 0 otherwise. (SDC)
Acq(Trg)_TobinsQ	Market value of assets divided by the acquirer's book value of assets (AT) in the year prior to the acquisition. Market value of assets is calculated as: book value of assets (AT) minus shareholder's equity (CEQ) plus market value of equity (PRCC F*CSHO). (CS)
Acq_SmallConsistent	Indicator variable equal to 1 if <i>Acq_Small</i> is equal to 1 in at least three of the five years preceding the acquisition, and 0 otherwise. (CS)
Acq_SmallSum	The number of years that <i>Acq_Small</i> is equal to 1 in the five years preceding the acquisition year. (CS)
AcquirerCharacteristics	The vector of acquirer control variables used to estimate the effect of transfer pricing incentives acquisition premiums, including <i>Acq_Size</i> , <i>Acq_TobinsQ</i> , <i>Acq_ROA_Beg</i> , <i>Acq_Lev</i> , <i>Toehold</i> , <i>Acq_Litigation</i> , <i>Acq_BigN</i> , <i>Acq_TermFee</i> , and <i>Acq_BTD</i> .
AcquirerControls	The vector of acquirer control variables used to estimate the effect of transfer pricing incentives on purchase price allocation to intangible assets (H1), including <i>Acq_BTM</i> , <i>CEO_Bonus</i> , <i>Log_CEO_Own</i> , <i>Execucomp_Missing</i> , and <i>Acq_MNC</i> .
ActiveHaven	An indicator variable equal to 1 if the name of a tax haven country in the acquirer's Exhibit 21 appears within 25 words of an offshoring keyword in the acquirer's 10-K in the year prior to the acquisition, and 0 otherwise. (LM)

Adj_Intang%	Total value allocated to intangible assets scaled by <i>DealValue</i> minus the Fama-French 12 industry mean of the total value allocated to intangible assets scaled by <i>DealValue</i> . (CS, HL)
AggShift	Either <i>Acq_SmallConsistent</i> or <i>Acq_SmallSum</i> .
AllStock	An indicator variable equal to 1 if the deal is 100 percent stock-financed, and 0 otherwise. (SDC)
CEO_Bonus	Ratio of the acquirer CEO's bonus over her total compensation received, averaged over the two years prior to the acquisition. Set to zero if missing Execucomp data required to calculate this variable. (EXEC)
Controls	The vector of control variables used to estimate the effect of under-allocation of the purchase price to intangible assets on changes to IRS scrutiny, including <i>Acq_CashETR</i> , <i>Acq_GAAPETR</i> , <i>Acq_BT D</i> , <i>Acq_SizeAT</i> , <i>Acq_MTB</i> , <i>Acq_Leverage</i> , <i>Acq_R&DIntensity</i> , <i>Acq_Inventory</i> , <i>Acq_CapitalIntensity</i> , <i>Acq_ROA</i> , <i>Acq_ChgNOL</i> , <i>Acq_Cash</i> , <i>Acq_SalesGrowth</i> , <i>Acq_Intangible</i> , <i>Acq_MNE</i> , <i>Acq_DTA</i> , and <i>Acq_DTL</i> .
DealCharacteristics	The vector of deal control variables used to estimate the effect of transfer pricing incentives acquisition premiums, including <i>Tender</i> , <i>AllStock</i> , <i>IndustrySame</i> , <i>HighTech</i> , <i>NBids</i> , and <i>DealRatio</i> .
DealControls	The vector of deal control variables used to estimate the effect of transfer pricing incentives on purchase price allocation to intangible assets (H1), including <i>Pct_Stock</i> , <i>Lack_Slack</i> , <i>Relative</i> , <i>Acq_Ret DV</i> , <i>Trg_Ret DV</i> , and <i>IndustrySame</i> .
DealRatio	The ratio of the deal value as indicated by SDC to the acquirer's market value of equity six days prior to the deal announcement date. (CRSP, SDC)
DealValue	The purchase price paid (in millions). (HL)
DomInventor	An indicator variable equal to 1 if all of the inventors listed on the patents filed by the acquirer in the five years preceding the acquisition are located in the US, and 0 otherwise. (PAT)
Execucomp_Missing	An indicator variable equal to 1 if data from Execucomp required to calculate CEO_Bonus and Log_CEO_Own is missing, and 0 otherwise. (EXEC)
HighTech	An indicator variable equal to 1 if both the acquirer and the target are in a high-technology industry. High-tech industries are as those in the following SIC codes: 2833–2836 (Pharmaceuticals), 3570–3577 (Computers), 3600–3674 (Electronics), 7371–7379 (Programming), or 8731–8734 (R&D Services), following Chow et al. (2016). (CS)
HighUnderAllocate	Indicator variable equal to 1 if the average <i>Adj_Intang_Pct</i> of all deals completed by the acquirer during the year times negative one is above the median, and 0 otherwise. (CS, HL)
IndustrySame	An indicator variable equal to 1 if the acquirer's two-digit SIC code is the same as the target's two-digit SIC code in the year prior to the acquisition, and 0 otherwise. (CS)

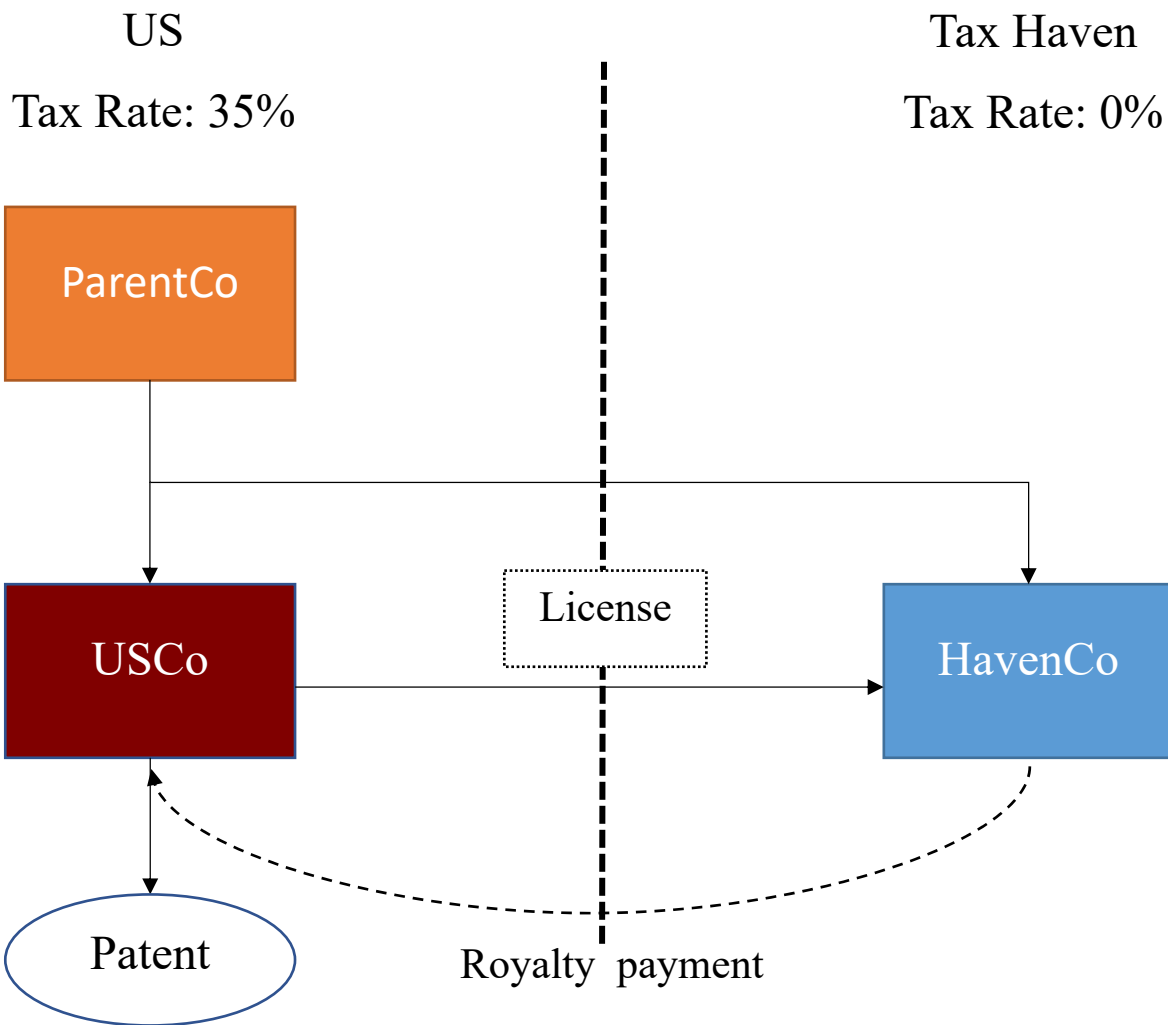
Intang%	Total value allocated to intangible assets scaled by <i>DealValue</i> . (HL)
IRS_10KDownloads	Count of the number of 10-K downloads by the IRS of the acquiring firm in the year. (BHTW)
Lack_Slack	Indicator variable equal to 1 if <i>DealValue</i> is greater than the difference between the acquirer's market value of equity ($PRCC_F \times CSHO$) and the acquirer's book value of equity (CEQ), and 0 otherwise. (CS, HL)
Log_CEO_Own	The natural logarithm of the total value of the acquirer's shares owned by the CEO of the acquirer in the year prior to the acquisition. Set to zero if missing Execucomp data required to calculate this variable. (EXEC, CS)
NBids	The number of bids for the target. (SDC)
Pct_Stock	Percentage of consideration paid with stock. (SDC)
Post	Indicator variable equal to 1 if the year is after the year of the deal announcement, and 0 otherwise. (SDC)
Prem1wk	The ratio of the offer price to the target's stock price one week prior to the deal announcement date minus one, and multiplied by 100. (SDC)
Prem4wk	The ratio of the offer price to the target's stock price four weeks prior to the deal announcement date minus one, and multiplied by 100. (SDC)
Relative	Acquirer's market value of equity ($PRCC_F \times CSHO$) in the year prior to the acquisition scaled by <i>DealValue</i> . (CS, HL)
TargetCharacteristics	The vector of target control variables used to estimate the effect of transfer pricing incentives acquisition premiums, including <i>Trg_Size</i> , <i>Trg_TobinsQ</i> , <i>Trg_ROA_Beg</i> , <i>Trg_Lev</i> , <i>Trg_DiscAcc</i> , <i>Trg_NOL</i> , <i>Trg_R&D_AT</i> , <i>Trg_Litigation</i> , <i>Trg_Foreign</i> , <i>Trg_MezzFin</i> , <i>Trg_EquityEarn</i> , <i>Trg_BigN</i> , <i>Trg_TermFee</i> , and <i>Trg_BT D</i> .
TargetControls	The vector of target control variables used to estimate the effect of transfer pricing incentives on purchase price allocation to intangible assets (H1), including <i>Trg_BTM</i> , <i>Trg_PPE</i> , <i>Trg_SalesGrowth</i> , <i>Trg_R&D</i> , <i>Trg_Advertising</i> , <i>Trg_Goodwill</i> , and <i>Trg_Intangibles</i> .
Tender	An indicator variable equal to 1 if the deal has a tender offer, and 0 otherwise. (SDC)
Toehold	The percentage of shares held by the acquirer in the target at the deal announcement date. (SDC)
Trg_Advertising	Target's advertising expense (XRD) averaged over the two years prior to the acquisition, scaled by <i>DealValue</i> . If advertising expense is missing in one of the two years, only the nonmissing year is used (Shalev et al. 2013). If advertising expense is missing for both years, then the two-year average is set to zero. (CS, HL)

Trg_DiscAcc	The absolute value of the target's discretionary accruals, estimated using the performance-matched Modified Jones model (Kothari et al. 2005) in the year prior to the acquisition year. (CS)
Trg_EquityEarn	Target's equity earnings (ESUB), scaled by beginning of year total assets (AT), multiplied by 100 in the year prior to the acquisition. (CS)
Trg_Foreign	Target's pre-tax foreign income (PIFO) scaled by beginning of year total assets (AT) in the year prior to the acquisition. Missing values of pre-tax foreign income are set equal to zero. (CS)
Trg_Goodwill	Target's goodwill (GDWL) in the year prior to the acquisition, scaled by <i>DealValue</i> . (CS, HL)
Trg_Intangibles	Target's intangible assets other than goodwill (INTANO) in the year prior to the acquisition, scaled by <i>DealValue</i> . (CS, HL)
Trg_MezzFin	The sum of the target's convertible debt and preferred stock (DCPSTK), scaled by beginning of year total assets (AT) in the year prior to the acquisition.
Trg_NOL	An indicator variable equal to 1 if the target's net operating loss carryforward balance (TLCF) in the year prior to the acquisition is greater than zero, and 0 otherwise. (CS)
Trg_PPE	Target's net property, plant, and equipment (PPENT) in the year prior to the acquisition, scaled by <i>DealValue</i> (Paugam et al. 2015). (CS)
Trg_R&D	Target's R&D expense (XRD) averaged over the two years prior to the acquisition, scaled by <i>DealValue</i> . If R&D expense is missing in one of the two years, only the nonmissing year is used (Shalev et al. 2013). If R&D expense is missing for both years, then the two-year average is set to zero. (CS, HL)
Trg_R&D_AT	Target's R&D expense (XRD) scaled by beginning of year total assets (AT) in the year prior to the acquisition. Missing values of R&D expense are set equal to zero. (CS)
Trg_Ret_DV	Target's dollar amount of stock return over the three-day period around the deal announcement date scaled by <i>DealValue</i> . (CRSP, HL)
Trg_SalesGrowth	Target's percentage change in sales (SALE) measured over the two years prior to the acquisition. (CS)

Data Sources:

CRSP: CRSP
CS: Compustat Fundamentals Annual or Compustat Segments
EXEC: Compustat Execucomp
HL: Houlihan Lokey
LM: Active Tax Haven data from Law and Mills (2022)
BHTW: IRS Attention data from Bozanic et al. (2017)
PAT: PatentsView
SDC: Securities Data Company

Figure 1



Sales from using patent
- <u>Royalty payments</u>
Income Shifted out of US

Table 1
Sample Selection Criteria

SDC Deals (public acquirers, \geq \$10M Deal value, \geq 50% shares owned after transaction, domestic targets) announced from 2003 to 2017 with Houlihan Lokey data	2,823
Less:	
Deals missing the Target GVKEY (including targets not publicly traded) and/or the Target Fama-French 12 industry classification	(2,009)
Deals with zero allocation to intangible assets	(31)
Deals missing Target permno	(212)
Deals missing Acquirer GVKEY and/or Acquirer permno	(4)
Deals where acquirer or target not incorporated in U.S.	(28)
Deals where acquirer or target is in utility or financial industry	(132)
Deals missing <i>AggShift</i> or acquirer or target control variables	(56)
Target industries with only one deal (singleton observations)	(16)
Sample used to estimate equation (1) for tests of H1	335

Table 2
Mean Allocation to Intangible Assets by Industry

	Target Fama-French 12 Industry	N	Mean Allocation to Intangible Assets
1	Consumer Nondurables	34	78.22%
2	Consumer Durables	13	40.97%
3	Manufacturing	64	34.84%
4	Energy	19	29.63%
5	Chemicals	16	31.82%
6	Business Equipment	219	35.00%
7	Telecommunications	39	41.64%
9	Retail	45	33.62%
10	Health	92	75.04%
12	Other	77	28.07%
	Total	618	

This panel presents the number of observations and mean allocation to intangible assets by Fama French 12 industry classification for the sample used to calculate the industry means.

Table 3
Descriptive Statistics

Variable	N	Mean	Std. Dev.	p25	p50	p75
<i>DealValue</i>	335	2,825.000	6,950.000	234.300	809.100	2,318.000
<i>Intang%</i>	335	0.384	0.239	0.221	0.342	0.500
<i>Trg_BTM</i>	335	0.469	0.404	0.226	0.391	0.624
<i>Trg_SalesGrowth</i>	335	0.121	0.322	-0.034	0.058	0.215
<i>Adj_Intang%</i>	335	-0.042	0.224	-0.190	-0.051	0.073
<i>Trg_R&D</i>	335	0.047	0.078	0.000	0.022	0.059
<i>Trg_Advertising</i>	335	0.010	0.027	0.000	0.000	0.005
<i>Trg_PPE</i>	335	0.162	0.297	0.019	0.050	0.142
<i>Trg_Goodwill</i>	335	0.104	0.158	0.000	0.036	0.144
<i>Trg_Intangibles</i>	335	0.044	0.080	0.000	0.010	0.053
<i>Acq_SmallConsistent</i>	335	0.104	0.306	0.000	0.000	0.000
<i>Acq_SmallSum</i>	335	0.543	1.172	0.000	0.000	0.000
<i>Acq_BTM</i>	335	0.387	0.273	0.195	0.336	0.507
<i>Acq_MNC</i>	335	0.776	0.417	1.000	1.000	1.000
<i>IndustrySame</i>	335	0.725	0.447	0.000	1.000	1.000
<i>Pct_Stock</i>	335	0.299	0.394	0.000	0.000	0.635
<i>Relative</i>	335	13.660	30.130	1.683	3.865	11.190
<i>Lack_Slack</i>	335	0.301	0.460	0.000	0.000	1.000
<i>Acq_Ret_DV</i>	335	0.018	0.743	-0.202	-0.029	0.143
<i>Trg_Ret_DV</i>	335	0.169	0.110	0.096	0.164	0.241
<i>CEO_Bonus</i>	335	0.044	0.082	0.000	0.000	0.050
<i>Execucomp_Missing</i>	335	0.278	0.448	0.000	0.000	1.000
<i>Log_CEO_Own</i>	335	6.790	4.635	0.000	8.410	10.110

This table reports summary statistics for the variables used in the main analysis. All variables are defined in Appendix A.

Table 4
Aggressive Income Shifters and Purchase Price Allocations

Variables	<i>DV = Adj_Intang%</i>	
	(1)	(2)
Acq_SmallConsistent	-0.108*** (-4.12)	
Acq_SmallSum		-0.027*** (-5.94)
Acq_BTM	-0.055 (-0.89)	-0.052 (-0.84)
CEO_Bonus	-0.081 (-0.74)	-0.075 (-0.68)
Log_CEO_Own	0.001 (0.22)	0.001 (0.21)
Execucomp_Missing	-0.011 (-0.25)	-0.011 (-0.25)
Acq_MNC	-0.059* (-1.73)	-0.055 (-1.64)
Trg_BTM	-0.102** (-2.66)	-0.105** (-2.77)
Trg_PPE	0.033 (0.50)	0.036 (0.55)
Trg_SalesGrowth	0.013 (0.46)	0.008 (0.29)
Trg_R&D	0.522** (2.12)	0.522** (2.07)
Trg_Advertising	2.073* (2.00)	2.078* (2.00)
Trg_Goodwill	0.262** (2.40)	0.266** (2.42)
Trg_Intangibles	0.448** (2.30)	0.449** (2.32)
Pct_Stock	-0.113*** (-2.99)	-0.115*** (-2.96)
Lack_Slack	-0.017 (-0.68)	-0.016 (-0.63)

Table 4 (Continued)

Relative	0.000 (0.16)	0.000 (0.16)
Acq_Ret_DV	-0.000 (-0.02)	-0.001 (-0.06)
Trg_Ret_DV	-0.260** (-2.67)	-0.251** (-2.69)
IndustrySame	-0.001 (-0.05)	0.002 (0.06)
Constant	0.067 (0.84)	0.065 (0.80)
Observations	335	335
Adjusted R-squared	0.372	0.369
SE Cluster	Target Industry	Target Industry
Target Industry FE	Yes	Yes
Year FE	Yes	Yes

This table presents the results of OLS regressions of Adj_Intang% on our variables of interest and control variables. Our aggressive income shifting measure of interest is Acq_SmallConsistent in Column (1) and Acq_SmallSum in Column (2). Standard errors are clustered by target industry. Robust t-statistics are presented in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests. All variables are defined in Appendix A.

Table 5
Aggressive Income Shifters, Purchase Price Allocations, and Active Tax Haven Subsidiaries

Variables	DV: <i>Adj_Intang%</i>			
	<i>AggShift = Acq_SmallConsistent</i>		<i>AggShift = Acq_SmallSum</i>	
	ActiveHaven=1	ActiveHaven=0	ActiveHaven=1	ActiveHaven=0
	(1)	(2)	(3)	(4)
AggShift	-0.126*** (-4.04)	-0.012 (-0.34)	-0.029*** (-6.13)	-0.012 (-1.21)
Acq_BTM	0.086 (1.60)	-0.063 (-1.10)	0.076 (1.29)	-0.063 (-1.10)
CEO_Bonus	-0.175 (-1.32)	-0.239 (-1.61)	-0.147 (-1.18)	-0.216 (-1.40)
Log_CEO_Own	0.008** (2.37)	0.006 (1.15)	0.006** (1.99)	0.007 (1.24)
Execucomp_Missing	0.106*** (3.26)	-0.022 (-0.39)	0.090*** (2.69)	-0.017 (-0.30)
Acq_MNC	-0.076 (-1.54)	-0.071** (-2.04)	-0.069 (-1.45)	-0.070** (-2.02)
Trg_BTM	-0.064** (-2.05)	-0.121** (-2.50)	-0.071** (-2.20)	-0.121** (-2.55)
Trg_PPE	-0.123** (-2.19)	0.055 (0.63)	-0.090* (-1.81)	0.054 (0.63)
Trg_SalesGrowth	-0.032 (-1.37)	0.076 (1.63)	-0.046** (-2.45)	0.076 (1.64)
Trg_R&D	0.053 (0.26)	0.887*** (5.73)	0.070 (0.31)	0.876*** (5.57)
Trg_Advertising	-0.172 (-0.07)	2.239** (2.45)	-0.168 (-0.07)	2.232** (2.45)
Trg_Goodwill	0.374*** (3.16)	0.227** (2.55)	0.373*** (3.00)	0.230*** (2.61)

Table 5, Continued

Trg_Intangibles	0.063 (0.28)	0.710*** (4.03)	0.064 (0.34)	0.711*** (4.05)
Pct_Stock	-0.134*** (-2.91)	-0.107** (-2.45)	-0.134*** (-2.99)	-0.108** (-2.50)
Lack_Slack	-0.045 (-0.82)	0.008 (0.34)	-0.047 (-0.82)	0.008 (0.33)
Relative	0.000 (0.39)	-0.000 (-0.08)	0.000 (0.33)	-0.000 (-0.12)
Acq_Ret_DV	-0.006 (-0.50)	0.016 (0.71)	-0.007 (-0.49)	0.017 (0.78)
Trg_Ret_DV	-0.254** (-2.41)	-0.202 (-1.56)	-0.202* (-1.74)	-0.206 (-1.59)
IndustrySame	0.003 (0.07)	0.016 (0.55)	0.010 (0.24)	0.017 (0.57)
Constant	0.275** (2.40)	-0.156 (-1.28)	0.281*** (2.68)	-0.162 (-1.36)
Observations	156	172	156	172
SE Cluster	Target Industry	Target Industry	Target Industry	Target Industry
Adjusted R-squared	0.2397	0.4496	0.2249	0.4506
Target Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Test of AggShift Differences				
Difference		-0.114**		-0.017*
χ^2		5.03		2.94

This table presents the results of estimating Equation (1) for subsamples created by partitioning the sample on ActiveHaven. Our aggressive income shifting measure of interest is Acq_SmallConsistent in Columns (1) and (2) and Acq_SmallSum in Columns (3) and (4). Standard errors are clustered by target industry. Robust z-statistics are presented in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests. To test coefficient equality for AggShift across columns, we estimate the regressions simultaneously. All variables are defined in Appendix A.

Table 6
Aggressive Income Shifters, Purchase Price Allocations, and Domestic Intangibles

Variables	DV: <i>Adj_Intang%</i>			
	<i>AggShift = Acq_SmallConsistent</i>		<i>AggShift = Acq_SmallSum</i>	
	DomInventor=1	DomInventor=0	DomInventor=1	DomInventor=0
	(1)	(2)	(3)	(4)
AggShift	-0.231*** (-8.43)	-0.075* (-1.95)	-0.072*** (-6.14)	-0.021** (-2.47)
Acq_BTM	0.096 (0.95)	0.056 (0.73)	0.060 (0.63)	0.078 (1.02)
CEO_Bonus	-0.253 (-1.42)	0.009 (0.03)	-0.172 (-0.93)	0.017 (0.06)
Log_CEO_Own	0.001 (0.10)	0.012** (2.26)	0.002 (0.20)	0.012*** (2.69)
Execucomp_Missing	-0.111** (-2.53)	0.135* (1.77)	-0.100*** (-2.75)	0.139** (2.04)
Acq_MNC	-0.054 (-1.12)	-0.012 (-0.19)	-0.023 (-0.47)	-0.007 (-0.10)
Trg_BTM	0.050 (0.73)	-0.130* (-1.66)	0.084 (1.46)	-0.133* (-1.72)
Trg_PPE	-0.200 (-0.40)	-0.164 (-1.15)	-0.221 (-0.41)	-0.155 (-1.05)
Trg_SalesGrowth	0.029 (1.00)	-0.010 (-0.26)	0.042* (1.78)	-0.019 (-0.48)
Trg_R&D	0.507*** (3.42)	0.280 (1.08)	0.524*** (3.88)	0.279 (1.07)
Trg_Advertising	6.742*** (7.35)	5.045** (2.24)	6.338*** (6.70)	4.879** (2.13)
Trg_Goodwill	0.173 (1.34)	0.223 (1.11)	0.217 (1.62)	0.215 (1.09)

Table 6, Continued

Trg_Intangibles	0.284 (0.49)	0.471** (2.34)	0.299 (0.50)	0.464** (2.42)
Pct_Stock	-0.036 (-0.41)	-0.143** (-2.28)	-0.038 (-0.41)	-0.145** (-2.55)
Lack_Slack	-0.022 (-0.49)	0.002 (0.04)	-0.020 (-0.42)	0.001 (0.02)
Relative	-0.000 (-0.32)	-0.000 (-0.53)	-0.000 (-0.63)	-0.000 (-0.52)
Acq_Ret_DV	0.025*** (3.84)	-0.002 (-0.10)	0.014*** (3.08)	-0.001 (-0.03)
Trg_Ret_DV	-0.217 (-1.46)	-0.588*** (-8.52)	-0.101 (-0.71)	-0.593*** (-10.10)
IndustrySame	0.020 (0.33)	0.018 (0.36)	0.022 (0.38)	0.020 (0.40)
Constant	-0.852*** (-4.67)	-0.321* (-1.85)	-0.848*** (-4.35)	-0.334* (-1.89)
Observations	84	106	84	106
SE Cluster	Target Industry	Target Industry	Target Industry	Target Industry
Adjusted R-squared	0.5304	0.2059	0.5356	0.2066
Target Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Test of AggShift Differences				
Difference		-0.156***		-0.051***
χ^2		10.63		7.32

This table presents results of estimating Equation (1) for subsamples created by partitioning the sample on DomInventor. Our aggressive income shifting measure of interest is Acq_SmallConsistent in Columns (1) and (2) and Acq_SmallSum in Columns (3) and (4). Robust z-statistics are presented in parentheses. ***, **, * Indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests. To test coefficient equality for AggShift across columns, we estimate the regressions simultaneously. All variables are defined in Appendix A.

Table 7
Post-Acquisition IRS Scrutiny

Panel A: Descriptive Statistics						
Variables	N	Mean	Std. Dev.	p25	p50	p75
<i>IRS_10KDownloads</i>	247	11.610	20.750	0.000	4.000	12.000
<i>Post</i>	247	0.502	0.501	0.000	1.000	1.000
<i>HighUnderAllocate</i>	247	0.498	0.501	0.000	0.000	1.000
<i>Acq_SmallConsistent</i>	247	0.097	0.297	0.000	0.000	0.000
<i>Acq_SmallSum</i>	247	0.462	1.092	0.000	0.000	0.000
<i>Acq_CashETR</i>	247	0.189	0.187	0.053	0.157	0.268
<i>Acq_GAAPETR</i>	247	0.242	0.161	0.141	0.251	0.331
<i>Acq_BT D</i>	247	0.044	0.137	-0.006	0.038	0.073
<i>Acq_DTA</i>	247	0.058	0.037	0.033	0.049	0.079
<i>Acq_DTL</i>	247	0.057	0.044	0.020	0.052	0.087
<i>Acq_SizeAT</i>	247	8.274	1.888	6.935	8.233	9.625
<i>Acq_MTB</i>	247	4.730	8.650	1.842	2.861	4.831
<i>Acq_Leverage</i>	247	0.255	0.328	0.046	0.186	0.301
<i>Acq_R&DIntensity</i>	247	0.101	0.109	0.000	0.067	0.161
<i>Acq_Inventory</i>	247	0.099	0.105	0.008	0.066	0.150
<i>Acq_CapitalIntensity</i>	247	0.198	0.181	0.070	0.134	0.277
<i>Acq_ROA</i>	247	0.072	0.104	0.029	0.077	0.127
<i>Acq_ChgNOL</i>	247	0.023	0.103	-0.004	0.000	0.015
<i>Acq_Cash</i>	247	0.147	0.125	0.051	0.110	0.214
<i>Acq_SalesGrowth</i>	247	0.214	0.269	0.050	0.151	0.287
<i>Acq_Intangible</i>	247	0.390	0.353	0.142	0.336	0.489
<i>Acq_MNE</i>	247	0.870	0.336	1.000	1.000	1.000

Table 7, Continued

Panel B: Regression Results		
Variables	<i>AggShift</i>	
	<i>Acq_SmallConsistent</i>	<i>Acq_SmallSum</i>
	(1)	(2)
Post	0.062 (0.17)	-0.019 (-0.06)
HighUnderAllocate	0.086 (0.40)	0.155 (0.71)
AggShift	-0.433 (-1.27)	-0.033 (-0.35)
AggShift x HighUnderAllocate	0.777** (1.97)	0.104 (0.95)
Post x HighUnderAllocate	-0.002 (-0.01)	0.035 (0.10)
Post x AggShift	0.506 (1.15)	0.153 (1.56)
Post x AggShift x HighUnderAllocate	-1.676*** (-2.94)	-0.446** (-2.54)
Acq_CashETR	0.789* (1.76)	0.795** (1.96)
Acq_GAAPETR	0.319 (0.40)	0.349 (0.46)
Acq_BT D	2.938* (1.88)	2.325 (1.60)
Acq_SizeAT	0.426*** (8.10)	0.417*** (7.80)
Acq_MTB	0.036*** (3.63)	0.038*** (3.71)
Acq_Leverage	-0.457 (-1.01)	-0.462 (-1.03)
Acq_R&DIntensity	0.869 (0.58)	1.062 (0.72)
Acq_Inventory	2.103 (0.94)	2.432 (1.16)
Acq_CapitalIntensity	-0.785 (-0.98)	-0.639 (-0.80)

Table 7, Continued

Acq_ROA	-0.599 (-0.42)	-0.216 (-0.16)
Acq_ChgNOL	-3.391* (-1.78)	-2.720 (-1.55)
Acq_Cash	2.186** (2.26)	2.240** (2.32)
Acq_SalesGrowth	-0.649 (-1.15)	-0.560 (-1.04)
Acq_Intangible	-0.898** (-2.17)	-0.946** (-2.20)
Acq_MNE	1.017*** (3.14)	1.078*** (3.45)
Acq_DTA	3.538* (1.72)	3.609* (1.72)
Acq_DTL	2.502 (0.91)	1.552 (0.53)
Constant	-2.863*** (-3.65)	-2.925*** (-3.77)
Observations	247	247
SE Cluster	Acquirer	Acquirer
Year FE	Yes	Yes
Acquirer Industry FE	Yes	Yes
Pseudo R-Squared	0.632	0.632

This table presents the results of estimating equation (2) using Poisson regression to test the effect of purchase price allocations to intangible assets on post-acquisition IRS scrutiny. Panel A presents descriptive statistics for the variables used to test the effect of purchase price allocations on post-acquisition IRS scrutiny. Panel B presents regression results. The dependent variable is IRS_10KDownloads. Our aggressive income shifting measure of interest is Acq_SmallConsistent in Column (1) and Acq_SmallSum in Column (2). Standard errors are clustered by acquirer. Robust z-statistics are presented in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests. All variables are defined in Appendix A.

Table 8
Acquisition Premiums

Variables	DV= Prem4wk		DV = <i>Prem1wk</i>	
	Acq_Small Consistent	<i>Acq_SmallSum</i>	Acq_Small Consistent	<i>Acq_SmallSum</i>
	(1)	(2)	(3)	(4)
AggShift	-5.762 (-0.97)	-0.666 (-0.39)	-4.410 (-0.96)	-0.408 (-0.30)
Acq_Size	6.856*** (2.80)	6.896*** (2.80)	4.371** (2.56)	4.408** (2.58)
Acq_TobinsQ	0.577 (0.28)	0.603 (0.29)	1.143 (0.76)	1.174 (0.78)
Acq_ROA_Beg	-24.459 (-1.13)	-24.778 (-1.14)	-14.235 (-0.86)	-14.460 (-0.87)
Acq_Lev	-16.278 (-1.49)	-15.967 (-1.46)	-13.841 (-1.64)	-13.578 (-1.61)
Toehold	0.158 (0.49)	0.158 (0.49)	0.460** (1.99)	0.458** (1.98)
Acq_Litigation	3.167 (0.53)	3.121 (0.51)	-0.058 (-0.01)	-0.121 (-0.02)
Acq_BigN	-14.806 (-1.22)	-14.707 (-1.21)	-18.411** (-2.08)	-18.349** (-2.07)
Acq_TermFee	-4.010 (-0.96)	-4.263 (-1.02)	-4.471 (-1.29)	-4.690 (-1.36)
Acq_BT D	29.524* (1.73)	29.424* (1.71)	12.530 (0.94)	12.338 (0.91)
Trg_Size	-7.108** (-2.28)	-7.203** (-2.30)	-3.376 (-1.53)	-3.467 (-1.57)
Trg_TobinsQ	1.746 (1.02)	1.712 (1.00)	0.831 (0.53)	0.799 (0.51)
Trg_ROA_Beg	-16.294 (-1.20)	-17.127 (-1.26)	-18.942* (-1.70)	-19.655* (-1.77)
Trg_Lev	20.990 (1.61)	20.458 (1.57)	19.445* (1.86)	18.995* (1.81)
Trg_DiscAcc	23.542** (2.06)	22.889** (1.99)	27.916** (2.41)	27.323** (2.33)
Trg_NOL	-2.563 (-0.49)	-2.461 (-0.47)	1.274 (0.34)	1.371 (0.36)
Trg_R&D_AT	-16.371 (-0.96)	-16.730 (-0.98)	-27.391 (-1.56)	-27.643 (-1.57)

Table 8, Continued

Trg_Litigation	2.133 (0.33)	2.215 (0.34)	3.510 (0.67)	3.597 (0.68)
Trg_Foreign	-93.241 (-1.17)	-92.671 (-1.15)	-92.025 (-1.47)	-91.623 (-1.46)
Trg_MezzFin	-27.885 (-1.24)	-26.982 (-1.20)	-16.531 (-0.90)	-15.794 (-0.86)
Trg_EquityEarn	2.294 (0.30)	2.255 (0.29)	0.394 (0.05)	0.356 (0.05)
Trg_BigN	6.477 (0.93)	6.649 (0.95)	4.817 (0.94)	4.951 (0.96)
Trg_TermFee	-9.206 (-1.44)	-9.202 (-1.44)	-0.684 (-0.14)	-0.676 (-0.14)
Trg_BT D	-4.271 (-0.63)	-4.559 (-0.68)	-0.240 (-0.05)	-0.485 (-0.10)
Tender	3.681 (0.85)	3.842 (0.88)	3.343 (0.91)	3.488 (0.95)
AllStock	-4.028 (-0.67)	-3.821 (-0.63)	-2.892 (-0.56)	-2.693 (-0.51)
IndustrySame	8.302* (1.70)	8.446* (1.74)	5.820 (1.46)	5.928 (1.50)
HighTech	-2.111 (-0.40)	-2.236 (-0.43)	-1.341 (-0.32)	-1.477 (-0.35)
NBids	17.101 (1.49)	17.109 (1.48)	17.661* (1.78)	17.692* (1.78)
DealRatio	6.614 (0.85)	7.169 (0.92)	3.364 (0.48)	3.872 (0.55)
Constant	17.586 (0.92)	17.142 (0.90)	8.094 (0.54)	7.693 (0.51)
Observations	267	267	267	267
Adjusted R-squared	0.147	0.144	0.161	0.159
Robust SE	Yes	Yes	Yes	Yes
Target Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

This table presents the results of estimating equation (3) to test whether acquirers that aggressively shift income pay higher acquisition premiums. Columns (1) to (2) use the one-week premium measure collected by SDC as the dependent variable. Columns (3) to (4) use the four-week premium measure collected by SDC as the dependent variable. ***, **, * Indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests. Robust t-statistics are presented in parentheses. All variables are defined in Appendix A.